

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/038775 A1(51) International Patent Classification⁷: H01L 21/20,
21/336, 29/786, H01S 3/10, B23K 26/02, C23C 16/24,
16/48(74) Agent: YOU ME PATENT & LAW FIRM; Teheran
Bldg., 825-33, Yoksam-dong, Kangnam-ku, 135-080
Seoul (KR).(21) International Application Number:
PCT/KR2003/002212

(22) International Filing Date: 21 October 2003 (21.10.2003)

(25) Filing Language: English

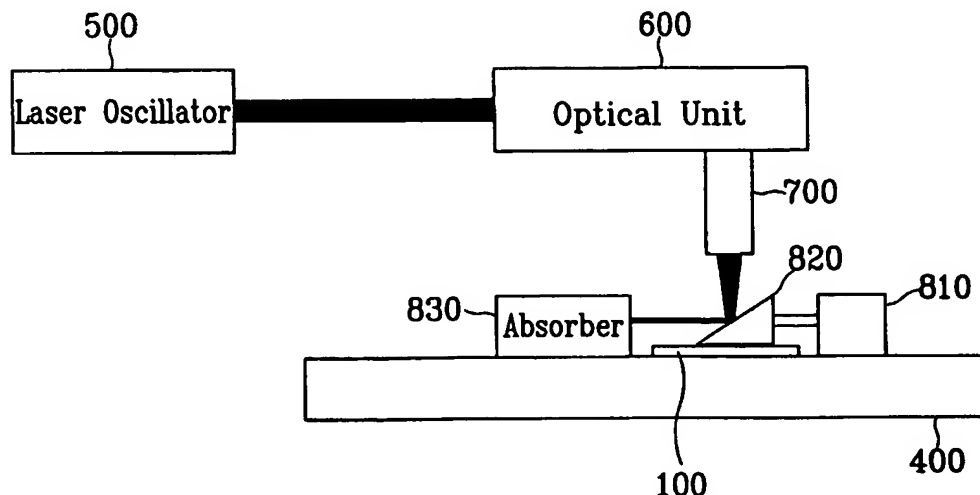
(26) Publication Language: English

(30) Priority Data:
10-2002-0064511 22 October 2002 (22.10.2002) KR(71) Applicants (for all designated States except US): SAM-
SUNG ELECTRONICS CO., LTD. [KR/KR]; 416, Mae-
tan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742
(KR). KIM, Hyun-Jae [KR/KR]; Cheonggu Apt. 601-
903, 123, Imae-dong, Bundang-ku, 463-060 Seongnam-
city, Kyungki-do (KR).(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(72) Inventor; and

(75) Inventor/Applicant (for US only): KANG, Myung-Koo
[KR/KR]; Misung Apt. 3-205, Sincheon-dong, Songpa-ku,
138-240 Seoul (KR).For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.(54) Title: METHOD OF POLYCRYSTALLIZATION, METHOD OF MANUFACTURING POLYSILICON THIN FILM TRAN-
SISTOR, AND LASER IRRADIATION DEVICE THEREFOR

(57) Abstract: A device for irradiating a laser beam onto an amorphous silicon thin film formed on a substrate. The device includes: a stage mounting the substrate; a laser oscillator for generating a laser beam; a projection lens for focusing and guiding the laser beam onto the thin film; a reflector for reflecting the laser beam guided onto the thin film; a controller for controlling a position of the reflector; and an absorber for absorbing the laser beam reflected by the reflector.